

Appl. No. 10/598,909

Reply to Final Office Action dated April 22, 2008

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A miscible primary composition comprising at least essential lipophilic and hydrophilic bioactive components of a material selected from the group consisting of whole fruit, vegetable and plant material, excluding insoluble fibers, with improved bioavailability, miscibility and stability in a carrier selected from the group consisting of milk, milk protein-containing carriers and combinations thereof, wherein the essential lipophilic and hydrophilic bioactive components are extracted from the material using the milk or milk protein-containing carrier.

Claim 2 (previously presented): The primary composition according to claim 1, wherein the material is in a form selected from the group consisting of vegetables, leaves, flowers, fruits, seeds and other parts of the plant, and combinations thereof.

Claim 3 (previously presented): The primary composition according to claim 1, wherein the material is selected from the group consisting of a berry, vegetables, seeds, flowers, citrus fruits, tomato, spinach, celery, carrots, pea, kale, parsley, watercress, cabbage, broccoli, lettuce, brussels sprouts, collard greens, turnip greens, fennel, onions, tea, corn, cocoa, coffee, thyme, sweet red pepper, and combinations thereof.

Claim 4 (previously presented): The primary composition according to claim 1, wherein the essential lipophilic and hydrophilic bioactive components are selected from the group consisting of lipids, alkaloids, proteins, carbohydrates, carotenoids, polyphenolic compounds, vitamins, minerals, and combinations thereof.

Claim 5 (previously presented): The primary composition according to claim 4, comprising flavonoids selected from the group consisting of flavones, flavonols, flavanones, catechins, anthocyanidins, isoflavones, and combinations thereof.

Claim 6 (previously presented): The primary composition according to claim 4, wherein the carotenoids are selected from the group consisting of carotenes, xanthophylls, and combinations thereof.

Claim 7 (previously presented): The primary composition according to claim 1, wherein the milk is from animal origin.

Claim 8 (previously presented): The primary composition according to claim 1, which is in a form selected from the group consisting of a powder, gel, liquid, and combinations thereof.

Claim 9 (withdrawn): A process for the preparation of a composition comprising the steps of:

- i) mixing and milling a material selected from the group consisting of a fruit, vegetable and plant material in milk or milk protein-containing liquid medium, and
- ii) separating insoluble fibers to obtain an aqueous suspension comprising at least the essential lipophilic and hydrophilic bioactive components of the material selected from the group consisting of whole fruit, vegetable and plant material, excluding insoluble fibers, in a milk or milk protein-containing carrier.

Claim 10 (withdrawn): A process for increasing miscibility or dispersibility in an aqueous system, stability, and bio-availability of bioactive compounds of a material selected from the group consisting of a fruit, vegetable and plant material comprising the step of using a composition comprising at least the essential lipophilic and hydrophilic bioactive components of the material in a milk or milk protein-containing carrier.

Claim 11 (withdrawn): A process according to claim 9, wherein the natural bioactive components are selected from the group consisting of amino acids, fatty acids, vitamins, minerals, carotenoids, and polyphenols.

Claim 12 (currently amended): An oral composition comprising a primary composition comprising at least essential lipophilic and hydrophilic bioactive components of a material selected from the group consisting of whole fruit, vegetable, and plant material, excluding insoluble fibers, and combinations thereof, with improved bioavailability, miscibility and stability in a milk or milk protein-containing carrier in a form selected from the group consisting of a foodstuff for oral administration, a food supplement, a pet food product, a cosmetic preparation, a pharmaceutical preparation, and combinations thereof, wherein the essential lipophilic and hydrophilic bioactive components are extracted from the material using the milk or milk protein-containing carrier.

Claim 13 (previously presented): An oral composition according to claim 12, which is a form selected from the group consisting of a nutritional complete formula, a dairy product, a chilled or shelf stable beverage, a mineral or purified water, a liquid drink, a soup, a dietary supplement, a meal replacement, a nutritional bar, a confectionery, a milk or a fermented milk product, a yoghurt, a milk based powder, an enteral nutrition product, an infant formula, an infant nutritional product, a cereal product or a fermented cereal based product, an ice-cream, a chocolate, coffee, a culinary product such as mayonnaise, tomato puree, salad dressings, a pet food, and combinations thereof.

Claim 14 (currently amended): An oral cosmetic or pharmaceutical composition comprising a primary composition comprising at least essential lipophilic and hydrophilic bioactive components of a material selected from the group consisting of whole fruit, vegetable and plant material, excluding insoluble fibers, with improved bioavailability, miscibility and stability in a milk or milk protein-containing carrier, which is in a tablet form selected from the group consisting of a capsule, a pill, a solution, a suspension, a syrup, a dried oral supplement, a wet oral supplement, and combinations thereof, wherein the essential lipophilic and hydrophilic bioactive components are extracted from the material using the milk or milk protein-containing carrier.

Claim 15 (withdrawn): A method for delivering the multi-nutrients of functional ingredients of fruits and plant material with improved bio-availability, miscibility and stability comprising the steps of administering to an individual a composition comprising at least essential lipophilic and hydrophilic bioactive components of a material selected from the group consisting of whole fruit, vegetable and plant material, excluding insoluble fibers, in a milk or milk protein-containing carrier.

Claim 16 (withdrawn): A method for improving skin health, in particular for photo protection of the skin or for protecting skin tissue against ageing comprising the step of administering to an individual in need of same a composition comprising at least the essential lipophilic and hydrophilic bioactive components of a material selected from the group consisting of whole fruit, vegetable and plant material, excluding insoluble fibers, in a milk or milk protein-containing carrier.

Claim 17 (withdrawn): A method for eye health comprising the step of administering to an individual in need of same a composition comprising at least essential lipophilic and hydrophilic bioactive components of a material selected from the group consisting of whole fruit, vegetable and plant material, excluding insoluble fibers, in a milk or milk protein-containing carrier.

Claim 18 (withdrawn): A method for stimulating the immune system comprising the step of administering to an individual in need of same a composition comprising at least essential lipophilic and hydrophilic bioactive components of a material selected from the group consisting of whole fruit, vegetable and plant material, excluding insoluble fibers, in a milk or milk protein-containing carrier.

Claim 19 (withdrawn): A method for preventing or treating cardiovascular diseases or disorders or cancers or diabetes comprising the steps of administering to a patient in need of same a composition comprising at least essential lipophilic and hydrophilic bioactive components of a material selected from the group consisting of whole fruit, vegetable and plant material, excluding insoluble fibers, in a milk or milk protein-containing carrier.

Claim 20 (previously presented): The primary composition according to claim 1, wherein the material is selected from the group consisting of wolfberry, blueberry, cranberry, white currant, red currant, blackcurrant, mulberry, blackberry, gooseberry, raspberry, sea buckthorn, strawberry, arbutus berry, grapes, flavonoid, polyphenol carotenoid-rich fruit, vegetables, seeds, flowers, apples, melons, kiwi, cherries, red date, prunes, peaches, persimmons, mandarin, orange, tangerine, grapefruit, chamomile, chrysanthemum, bitter orange, honeysuckle, jasmine and safflower, tomato, spinach, celery, carrots, pea, kale, parsley, watercress, cabbage, broccoli, lettuce, brussels sprouts, collard greens, turnip greens, fennel, onions, tea, corn, cocoa, coffee, thyme, sweet red pepper, and combinations thereof.

Claim 21 (previously presented): The primary composition according to claim 1, wherein the essential lipophilic and hydrophilic bioactive components are selected from the group consisting of apigenin, luteolin, diosmetin, quercetin, myricetin, kaempferol, naringenin, hesperidin, epicatechin, gallicatechin, pelargonidin, malvidin, cyanidin, genistein, daidzein, and combinations thereof.